

### **ABSTRACT**

The invention concerns a bipolar electrode with a semiconductor coating and a cathode, as well as a procedure for the electrolytic dissociation of water, especially for the recovery of hydrogen. The body material of the cathode and/or the anode in this procedure is preferably comprised of titanium or platinum coated titanium, whereby, on the anode an additional semiconductor coating is applied, said coating being preferentially titanium dioxide ( $\text{TiO}_2$ ), which is dosed with iron (Fe). The advantage of the bipolar electrode is that an increased volume of hydrogen per time unit can be recovered and further, with these bipolar electrodes a simple procedure at ambient surroundings and conditions is achieved without expensive equipment for hydrogen production. In addition the anode of the invented bipolar electrodes can also be radiated with UV-radiation for the purpose of an increase in efficiency.

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